

# NEW DATA ON *ASYNDETUS* (DIPTERA: DOLICHOPODIDAE) FROM CHINA, WITH DESCRIPTION OF A NEW SPECIES<sup>1</sup>

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**ABSTRACT:** A new species, *Asyndetus ventralis* sp. n., is described from Yunnan and a species, *Asyndetus thaicus* Grootaert and Meuffels, is recorded from China for the first time. A key is given to separate the Chinese species.

**KEY WORDS:** Dolichopodidae, *Asyndetus*, new species, China, new species

The genus *Asyndetus* Loew is distributed worldwide with 99 known species (Yang, Zhu, Wang and Zhang, 2006). It is characterized by the wing with vein costa ending at R<sub>4+5</sub> just before wing apex, vein M usually with bend or weakening in distal third of wing, male sternum 8 usually with four strong curved bristles (Negrobov, 1973; Bickel, 1996). The species of *Asyndetus* mostly occur within shores of freshwater, playa lakes and marine coastal habitats (Bickel, 1996). Ten species were known from China (Zhang and Yang, 2003; Wang and Yang, 2005). Here a new species and a newly recorded species are added to Chinese fauna. The types are kept in the Entomological Museum of China Agricultural University (CAU), Beijing.

The following abbreviations are used: acr - acrostichal, ad - anterodorsal, av - anteroventral, dc - dorsocentral, LI - fore leg, LII - mid leg, LIII - hind leg, oc - ocellar, pd - posterodorsal, pv - posteroventral, v - ventral.

## Updated key to species of *Asyndetus* from China (males)

1. Crossvein m-cu present .....2  
 – Crossvein m-cu absent; first flagellomere longer than wide. Neimeng;  
 Hungary, Mongolia .....*longicornis* Negrobov
2. Abdominal sternum 5 without long bristles; cercus without long apical bristles .....3  
 – Abdominal sternum 5 with many long bristles (wave-like curved apically);  
 cercus with 2 long curved apical bristles. Xinjiang .....  
 .....*wusuensis* Wang and Yang

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3. All legs entirely black .....4
  - Fore and mid tibiae yellow or brownish yellow .....7
4. Hind femur without row of ad or pd; lateral lobe on epandrium not trapezoidal .....5
  - Hind femur with row of ad and pd; lateral lobe on epandrium trapezoidal, with long apical bristle on finger-like process and short subapical bristle. Guangxi..... *guangxiensis* Zhang and Yang
5. Fore tarsus not shortened, without rowed pv; lateral lobe on epandrium nearly as long as surstylus; cercus not bilobate.....6
  - Fore tarsomeres 2 and 3 shortened, fore tarsomeres 1 and 2 with row of pv; lateral lobe on epandrium shorter than half of surstylus; cercus bilobate. Beijing.....*beijingensis* Zhang and Yang
6. Upper postocular bristles black, lower postocular bristles (including ventral hairs) yellow; lateral lobe on epandrium elongate, with 1 short bristle near tip. Yunnan; Thailand.....*thaicus* Grootaert and Meuffels
  - All postocular bristles white; lateral lobe on epandrium large with wide base and acute apex, apically with 3 bristles. Henan, Taiwan; Palaearctic and Oriental Regions .....*latifrons* (Loew)
7. Hind tibia partly or mostly yellow; lateral lobe on epandrium not subtriangular.....8
  - Hind tibia entirely black; lateral lobe on epandrium subtriangular. Yunnan.. .....*ventralis* sp. n.
8. Hind tibia chiefly yellow with brown apex .....9
  - Hind tibia brown to black with basal half reddish brown; hind femur just with sparse v. Taiwan .....*calcaratus* Becker
9. First flagellomere about as long as wide .....10
  - First flagellomere 1.7 times longer than wide. Xinjiang .....*xinjiangensis* Wang and Yang
10. First flagellomere with round apex; lateral lobe on epandrium indistinct, with thin finger-like process bearing bristle apically. Beijing, Fujian, Shanghai .....*perpulvillatus* Parent
  - First flagellomere with acute apex; lateral lobe on epandrium long and broad with wide apex, bearing 2 bristles apically. Xinjiang.....*lii* Wang and Yang

*Asyndetus thaicus* Grootaert and Meuffels

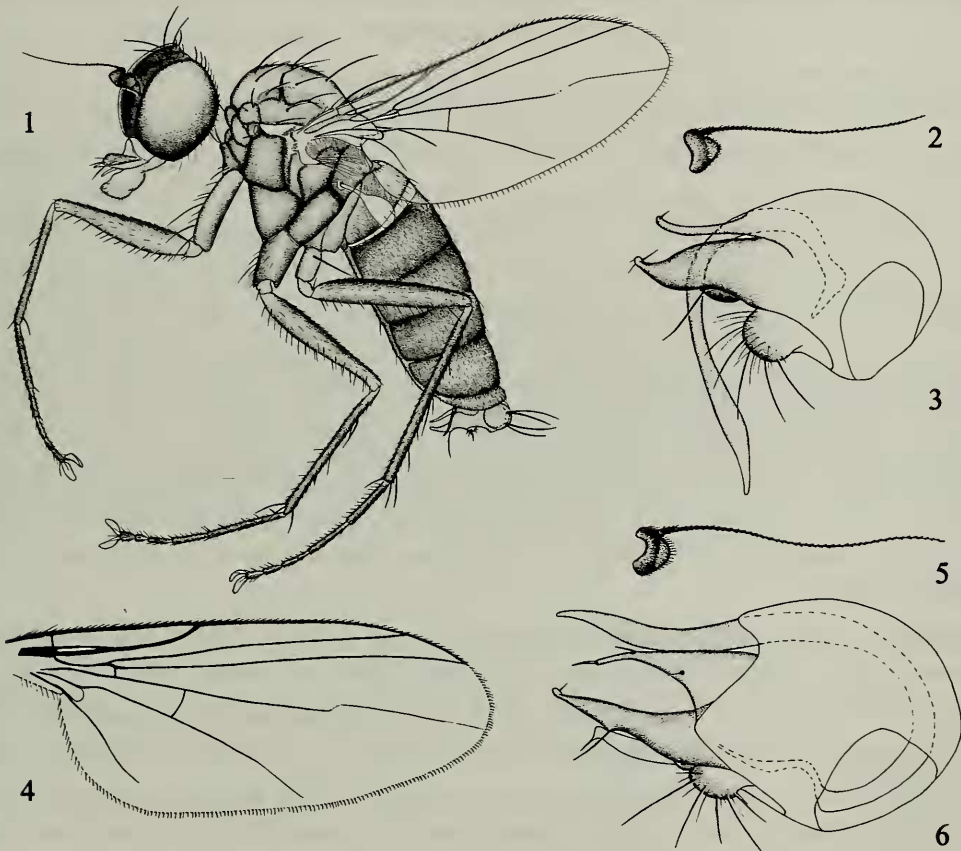
(Figs. 1-3)

*Asyndetus thaicus* Grootaert and Meuffels (2002): 42. Type locality: Thailand.

**Diagnosis:** First flagellomere 1.3 times wider than long; legs entirely black; lateral lobe on epandrium elongate, nearly as long as surstylus, with 1 short bristle near tip.

**Specimens Examined:** 57 males 12 females, Yunnan: Xishuangbanna, Jinghong (300m), 2002. IV. 12, Wenquan Zhen (with yellow pan traps).

**Distribution:** China (Yunnan); Thailand.



Figures 1-3. *Asyndetus thaicus* Grootaert and Meuffels, male; 4-6. *Asyndetus ventralis* sp. n., male. 1. Habitus. 2, 5. Antenna (excluding scape and pedicel). 3, 6. Genitalia, lateral view. 4. Wing.

*Asyndetus ventralis*, NEW SPECIES

(Figs. 4-6)

**Diagnosis:** First flagellomere 1.4 times wider than long; fore and mid tibiae brownish, hind tibia entirely black; hind femur with 2 rows of long ventral bristles.

**Description:** Male. Body length 3.1-3.3 mm, wing length 2.3-2.6 mm. Head metallic green with pale gray pollen. Hairs and bristles black; ocellar tubercle distinct with 2 strong oc and 2 posterior hairs; lower postocular bristles (including postero-ventral hairs) pale. Antenna black (Fig. 5); first flagellomere 1.4 times wider than long; arista dorsal, blackish, short pubescent, with basal segment rather short. Proboscis dark brown with brown hairs; palpus black with black hairs and 3 black apical bristles (2 short and 1 long).

Thorax dark metallic green with pale gray pollen. Hairs and bristles on thorax black; 4 uniformly strong dc, 6-7 paired acr short and hair-like; scutellum with 2 pairs of bristles (apical pair thick and long, basal pair rather short and hair-like). Propleuron with 1 black bristle on upper portion and 1 long and 1 short bristles on lower portion. Legs chiefly black except fore femur with yellow brownish apex, fore and mid tibiae brown, fore and mid tarsi brown or blackish. Hairs and bristles on legs black; fore coxa with 4 anterior and apical bristles; mid coxa with 2 anterior outer bristles; hind coxa with 1 outer bristle near base. Fore femur with row of av on basal half and pv on entire length; mid femur with 2 rows of v on apical 1/4; hind femur with 2 rows of long v (longer than femur width). Fore tibia with 1 ad near base and 1 pd at middle, apically with 4 bristles; mid tibia with 2 ad and 4 short v, apically with 4 bristles; hind tibia with 4 ad, 5 pd, and with 2 rows of v on basal half, apically with 4 bristles. All tarsomere 1 with row of short v, hind tarsomeres 2-3 each with row of short v. Legs without claws; elongate pulvilli of fore leg longer than tarsomere 5. Relative lengths of tibia and 5 tarsomeres LI 3.5: 2.0 : 0.75 : 0.5 : 0.3 : 0.3; LII 4.0 : 2.25 : 1.05 : 0.7 : 0.4 : 0.3; LIII 5.25 : 1.6 : 1.4 : 0.8 : 0.4 : 0.3. Wing hyaline (Fig. 4); veins brown,  $R_{4+5}$  and M divergent apically. CuAx ratio 0.2. Squama pale yellow with pale hairs. Haltere pale yellow.

Abdomen dark metallic green with pale gray pollen. Hairs and bristles on abdomen black. Terga 1-5 with row of posterior bristles; sternum 8 with 4 strong bristles. Male genitalia (Fig. 6): Lateral lobe on epandrium large, subtriangular, nearly as long as surstylus, with broad base and long acute apex, and with 1 long apical bristle and 1 short subapical bristle; surstylus thick and acute apically, with 1 short bristle near tip and 1 long bristle at middle, basally with 1 short and thick process; cercus nearly semicircular with moderately long bristles; aedeagus slender.

**Female:** Body length 2.7-3.2 mm, wing length 2.1-2.7 mm. Similar to male, but claws present and pulvilli not elongate.

**Holotype:** male, Yunnan: Xishuangbannan, Jinghong, 2002. IV. 12, W. Zhen (with yellow pan traps). **Paratypes:** 25 males 18 females, same data as holotype.

**Etymology:** The specific name refers to the hind femur with 2 rows of long v.

**Remarks:** The new species is somewhat similar to *Asyndetus calcaratus* Becker, but may be separated from the latter by the hind femur with long v and the entirely black hind tibia. In *A. calcaratus*, the hind femur has sparse v, and the hind tibia is brown to black with the basal half reddish brown (Becker, 1922).



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